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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/728,790	12/08/2003	Kia Silverbrook	MTB05US	8937

24011 7590 03/31/2006

SILVERBROOK RESEARCH PTY LTD
393 DARLING STREET
BALMAIN, NSW 2041
AUSTRALIA

EXAMINER

MRUK, GEOFFREY S

ART UNIT	PAPER NUMBER
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2853

DATE MAILED: 03/31/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

10/728,790

Applicant(s)

SILVERBROOK, KIA

Examiner

Geoffrey Mruk

Art Unit

2853

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 13 March 2006.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-22 is/are pending in the application.
- 4a) Of the above claim(s) 2-5, 9-11, 13-16 and 20-22 is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1, 6-8, 12 and 17-19 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 08 December 2003 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☒ Certified copies of the priority documents have been received in Application No. 09/112,767.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. _____ |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| Paper No(s)/Mail Date <u>12/12/03, 12/9/05</u> | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Election/Restrictions

Claims 2-5, 9-11, 13-16, and 20-22 are withdrawn from further consideration pursuant to 37 CFR 1.142(b) as being drawn to a nonelected species, there being no allowable generic or linking claim. Election was made **without** traverse in the reply filed on 13 March 2006.

Applicant's election of species 1 in the reply filed on 13 March 2006 is acknowledged. Because applicant did not distinctly and specifically point out the supposed errors in the restriction requirement, the election has been treated as an election without traverse (MPEP § 818.03(a)).

The examiner makes of record that the applicant's arguments/remarks dated 13 March 2006 are in response to the office action dated 21 February 2006. The examiner has not sent an email to applicant in this US application or any other US application filed by applicant.

Claim Rejections - 35 USC § 102

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

Claims 1, 6, 7, 12, 17, and 18 are rejected under 35 U.S.C. 102(b) as being anticipated by Sugitani et al. (US 4,611,219).

With respect to claim 1, Sugitani discloses an ink jet printhead (Fig. 1) comprising:

- a plurality of nozzles (Fig. 1, elements 8-3, 9-3);
- a bubble forming chamber (Fig. 1, elements 8-1, 9-1) corresponding to each of the nozzles respectively, the bubble forming chambers adapted to contain a bubble forming liquid (Column 4, lines 1-6); and
- at least one heater element (Fig. 1, element 2) disposed in each of the bubble forming chambers respectively, the heater elements configured for thermal contact with the bubble forming liquid; such that, heating the heater element to a temperature above the boiling point of the bubble forming liquid forms a gas bubble that causes the ejection of a drop of an ejectable liquid through the nozzle corresponding to that heater element (Column 2, lines 47-49);
- wherein the bubble forming chamber has a circular cross section (Column 3, lines 35-39).

With respect to claim 6, Sugitani discloses the ejectable liquid is the same as the bubble forming liquid (Column 4, lines 1-6).

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With respect to claim 7, Sugitani discloses the printhead is a pagewidth printhead (Column 7, lines 56-63).

With respect to claim 12, Sugitani discloses a printer system (Column 1, lines 6-10) which incorporates a printhead (Fig. 1), the printhead comprising:

- a plurality of nozzles (Fig. 1, elements 8-3, 9-3);
- a bubble forming chamber (Fig. 1, elements 8-1, 9-1) corresponding to each of the nozzles respectively, the bubble forming chambers adapted to contain a bubble forming liquid (Column 4, lines 1-6); and
- at least one heater element (Fig. 1, element 2) disposed in each of the bubble forming chambers respectively, the heater elements configured for thermal contact with the bubble forming liquid; such that, heating the heater element to a temperature above the boiling point of the bubble forming liquid forms a gas bubble that causes the ejection of a drop of an ejectable liquid through the nozzle corresponding to that heater element (Column 2, lines 47-49);
- wherein the bubble forming chamber has a circular cross section (Column 3, lines 35-39).

With respect to claim 17, Sugitani discloses the ejectable liquid is the same as the bubble forming liquid (Column 4, lines 1-6).

With respect to claim 18, Sugitani discloses the printhead is a pagewidth printhead (Column 7, lines 56-63).

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claims 8 and 19 are rejected under 35 U.S.C. 103(a) as being unpatentable over Sugitani et al. (US 4,611,219) in view of Chiang et al. (US 5,508,236).

With respect to claims 8 and 19, Sugitani discloses the inkjet printhead (Fig. 1) and the printer system (Column 1, lines 6-10) wherein the bubble forming chamber is at least partially formed by a ceramic material (Column 3, lines 22-25).

However, Sugitani fails to disclose the ceramic material is an amorphous ceramic material.

Chiang discloses a ceramic glass material where the ceramic material is amorphous (Column 12, lines 49-55).

At the time of the invention, it would have been obvious to use the ceramic glass composition disclosed by Chiang in the liquid-jetting head of Sugitani. The motivation for doing so would have been "an inexpensive ceramic exhibiting improved strength, hardness, and chemical and mechanical resistance" (Column 1, lines 38-41).

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Conclusion


Any inquiry concerning this communication or earlier communications from the examiner should be directed to Geoffrey Mruk whose telephone number is 571 272-2810. The examiner can normally be reached on 7am - 330pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Stephen Meier can be reached on 571 272-2149. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

GSM
3/27/2006

GM


3/29/06
MANISH S. SHAH
PRIMARY EXAMINER